

This Page Is Inserted by IFW Operations
and is not a part of the Official Record

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

IMAGES ARE BEST AVAILABLE COPY.

**As rescanning documents *will not* correct images,
please do not report the images to the
Image Problem Mailbox.**

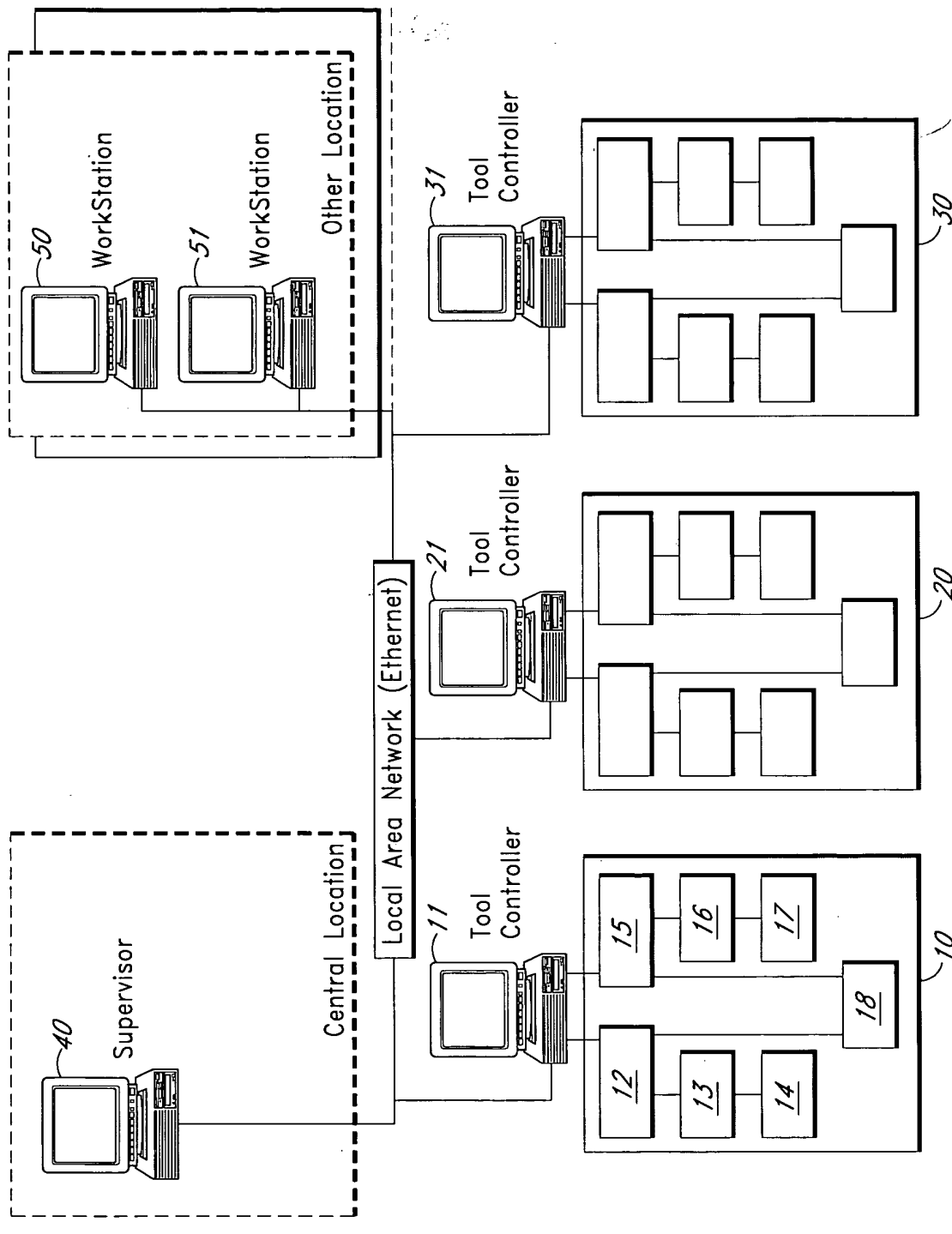


FIG. 1

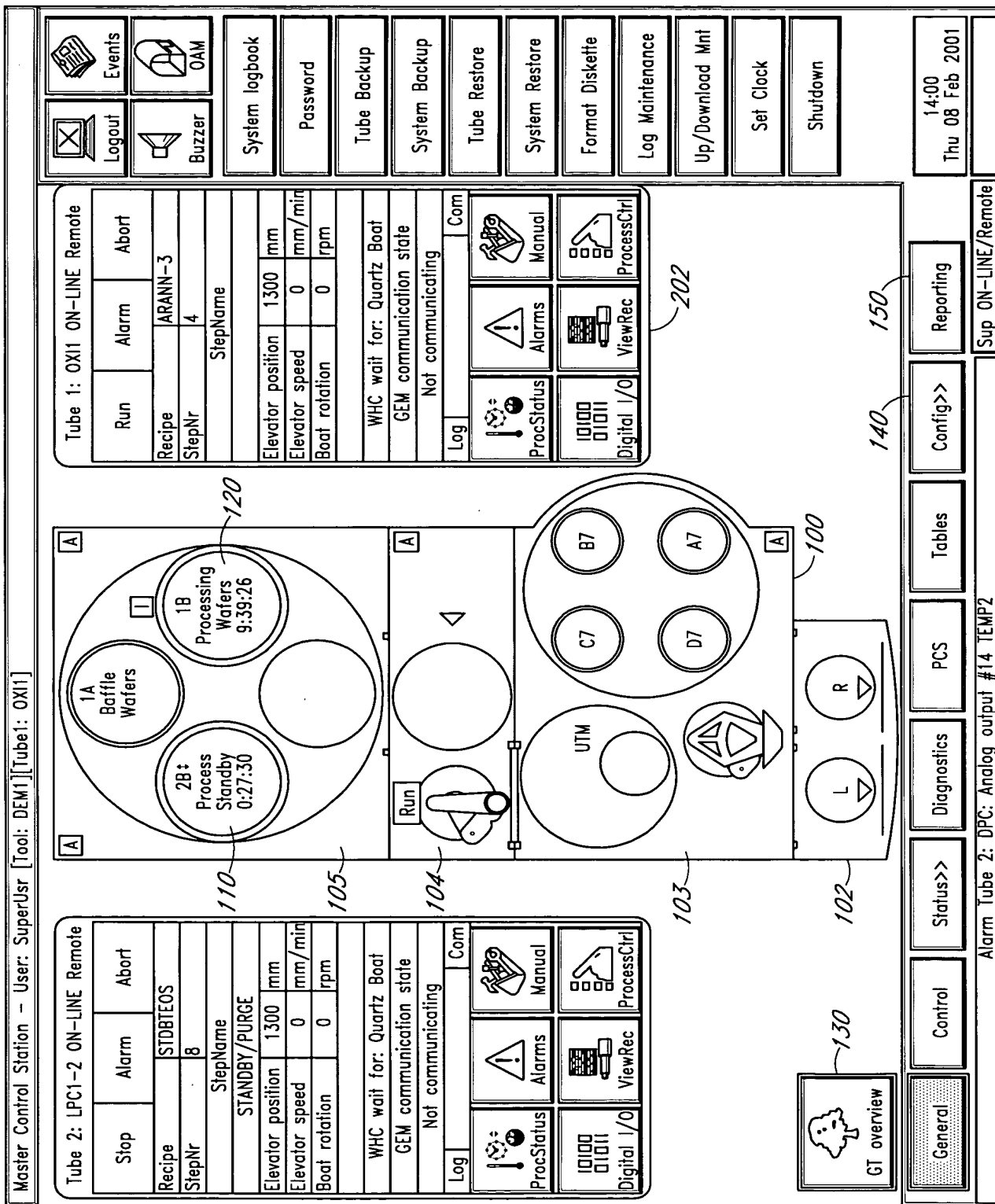


FIG. 2



Report: Green Tool overview - [Tool: DEM1]

Start time: 2000-10-01 00:00:00

End time: 2000-11-01 23:59:59

Channel	Unit	T1: OX11	T2: LPC1-2	Σ		
Ar	SL	8182.59	-	8182.59		
DCS	SL	-	455.40	455.40		
Exhaust	M ³	11309540.24	11252595.11	22562135.35		
H2	SCC	8447.01	-	8447.01		
N2	SL	433219.72	1876721.98	2309941.70		
N2 Carousel	SL	354198.17	-	354198.17		
N2 Purge	SL	193544.55	6305.37	199849.92		
N2-Bubbl	SL	360.59	-	360.59		
NH3	SL	-	0.00	0.00		
N0	SL	259.55	-	259.55		
O2	SL	12991.83	-	12991.83		
PH3/N2	SCC	-	1391717.47	1391717.47		
Power	Kwh	53.87	41.28	95.15		
SIH4	SL	-	0.00	0.00		
Teos	SL	-	5613.88	5613.88		
Water	L	1945579.87	15893389.20	3534918.07		

Exit

Filter

Print

Print Setup

Export

Alarm Tube 2: WHC: BTM Arm: WHR door switch

FIG. 3



170

4/11

Master Control Station - User: SuperUsr [Tool: DEM1][Tube1: OX11]

Stop

Alarm

Abort

Recipe

StepNr

StepName

Elevator position

Elevator speed

Boat rotation

WHC wait for: Operation Mode

GEM communication state

Log

Com

ProcStatus

Alarms

Manual

Digital I/O

ViewRec

ProcessCtrl

1A Baffle
Wafers

2B+ Process
Standby
0:27:30

1B Move to
Process
999:99:99

Stop

UTM

C5

D5

B5

A5

L

R

GT overview

<<Config

DPC

DTC

WHC

CHC

MSC

Tube 2: LPC1-2

Tube 1: OX11

Run

Alarm

Abort

Recipe

StepNr

StepName

Elevator position

Elevator speed

Boat rotation

WHC wait for: Operation Mode

GEM communication state

Log

Com

ProcStatus

Alarms

Manual

Digital I/O

ViewRec

ProcessCtrl

Events

OAM

Configuration

User Interface

Recipe Sequence

Safety Interlocks

Green Tool

INL Configuration

Logout

Buzzer

15:41

Fri 02 Feb 2001

FIG. 4



Green Tool Configuration editor - [Tool: DEM1]

Consumables	
N2 (oxi1)	
N2-Bubbl (oxi1)	
N2 Carousel () [MANUAL EDIT]	
O2 (oxi1)	
NO (oxi1)	
Ar (oxi1)	
H2 (OXI1)	
Exhaust (OXI1)	
Water (OXI1)	
N2 Purge (OXI1)	
Power (OXI1)	
N2 () [MANUAL EDIT]	
SiH4 () [MANUAL EDIT]	
NH3 () [MANUAL EDIT]	

Print all Consumables

Exit Save and Exit

WHC CHC MSC

Alarm Tube 2: WHC: House vacuum

15:42 Fri 02 Feb 2001

Events CAM Logout Buzzer Configuration User Interface Recipe Sequence Safety Interlocks Green Tool INL Configuration

FIG. 5



Green Tool Configuration editor - [Tool: DEM1]

Consumable: 02	Source ox11	Units	SL	measured per Minute	>>
I/O Channel	Correction	When	=	(and)	
A0 3: 02-High	>>		>>		>>
+ A0 4: 02-Low	/	1000	>>	1	>>
+	>>		>>		>>
+	>>		>>		>>
+	>>		>>		>>
+	>>		>>		>>
+	>>		>>		>>
+	/		>>		>>
+	>>		>>		>>

OK Cancel

<<Config DPC DTC WHC OHC MSC

Alarm Tube 1: WHC: BTM Arm: WHR door switch

12:13
Fri 02 Feb 2001

Events
CAM
Logout
Buzzer
Configuration
User Interface
Recipe Sequence
Safety Interlocks
Green Tool
IHL Configuration

FIG. 6



Green Tool Configuration editor - [Tool: DEM1]

Consumable:	Power	Source	OX1	Units	Kwh	measured per	Hour
I/O Channel	Correction	When	=	(and)			
+ Power zone: 1	>>	*	>>	6.327	>>	>>	>>
+ Power zone: 2	>>	*	>>	28.319	>>	1	>>
+ Power zone: 3	>>	*	>>	28.92	>>		>>
+ Power zone: 4	>>	*	>>	10.283	>>		>>
+ Power zone: 5	>>	*	>>	13.283	>>		>>
+ Power zone: 6	>>	*	>>	4.964	>>		>>
+	>>	/	>>	100	>>		>>
+	>>		>>		>>		>>

OK Cancel

<<Config DPC DTC WHC CHC MSC

Alarm Tube 2: DPC: Analog output #13 TEMPI

12:12
Fri 02 Feb 2001

Logout

Events

Buzzer

OAM

Configuration

User interface

Recipe Sequence

Safety Interlocks

Green Tool

Int. Configuration

FIG. 7

Master Control Station - User: SuperUsr [Tool: DEM1][Tube1: OX1]																																	
Tube 2: LPC1-2 <table border="1" style="width: 100%;"> <tr> <th>Stop</th> <th>Alarm</th> <th>Abort</th> </tr> <tr> <td colspan="3">Recipe STDBTEOS</td> </tr> <tr> <td colspan="3">StepNr 8</td> </tr> <tr> <td colspan="3">StepName STANDBY/PURGE</td> </tr> <tr> <td>Elevator position</td> <td>1300 mm</td> <td></td> </tr> <tr> <td>Elevator speed</td> <td>0 mm/min</td> <td></td> </tr> <tr> <td>Boat rotation</td> <td>0 rpm</td> <td></td> </tr> <tr> <td colspan="3">WHC wait for: Quartz Boat</td> </tr> <tr> <td colspan="3">GEM communication state Disabled</td> </tr> <tr> <td>Log</td> <td></td> <td>Com</td> </tr> </table>		Stop	Alarm	Abort	Recipe STDBTEOS			StepNr 8			StepName STANDBY/PURGE			Elevator position	1300 mm		Elevator speed	0 mm/min		Boat rotation	0 rpm		WHC wait for: Quartz Boat			GEM communication state Disabled			Log		Com	<div style="float: right; width: 100px; text-align: center;"> Events Logout OAM Buzzer </div> <div style="clear: both;"></div>	
Stop	Alarm	Abort																															
Recipe STDBTEOS																																	
StepNr 8																																	
StepName STANDBY/PURGE																																	
Elevator position	1300 mm																																
Elevator speed	0 mm/min																																
Boat rotation	0 rpm																																
WHC wait for: Quartz Boat																																	
GEM communication state Disabled																																	
Log		Com																															
<div style="position: relative; height: 200px;"> <div style="position: absolute; top: 0; left: 0; width: 100%; height: 100%; background-color: #f0f0f0; border-radius: 50%;"></div> <div style="position: absolute; bottom: 10px; left: 10px; width: 150px; height: 100px; border: 1px solid black; border-radius: 10px; background-color: white; padding: 5px;"> <div style="border: 1px solid black; border-radius: 50%; width: 40px; height: 40px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> Stop </div> <div style="margin-top: 10px;"> </div> </div> </div>		Tube 1: OX1 <table border="1" style="width: 100%;"> <tr> <th>Run</th> <th>Alarm</th> <th>Abort</th> </tr> <tr> <td colspan="3">Recipe T1MAIN</td> </tr> <tr> <td colspan="3">StepNr 1</td> </tr> <tr> <td colspan="3">StepName</td> </tr> <tr> <td>Elevator position</td> <td>1300 mm</td> <td></td> </tr> <tr> <td>Elevator speed</td> <td>0 mm/min</td> <td></td> </tr> <tr> <td>Boat rotation</td> <td>0 rpm</td> <td></td> </tr> <tr> <td colspan="3">WHC wait for: Quartz Boat</td> </tr> <tr> <td colspan="3">GEM communication state Disabled</td> </tr> <tr> <td>Log</td> <td></td> <td>Com</td> </tr> </table>		Run	Alarm	Abort	Recipe T1MAIN			StepNr 1			StepName			Elevator position	1300 mm		Elevator speed	0 mm/min		Boat rotation	0 rpm		WHC wait for: Quartz Boat			GEM communication state Disabled			Log		Com
Run	Alarm	Abort																															
Recipe T1MAIN																																	
StepNr 1																																	
StepName																																	
Elevator position	1300 mm																																
Elevator speed	0 mm/min																																
Boat rotation	0 rpm																																
WHC wait for: Quartz Boat																																	
GEM communication state Disabled																																	
Log		Com																															
<div style="float: right; width: 100px; text-align: center;"> Events Logout OAM Buzzer </div> <div style="clear: both;"></div>		<div style="float: right; width: 100px; text-align: center;"> Batch Event Tabular Graph Green Tool </div> <div style="clear: both;"></div>																															
<div style="float: right; width: 100px; text-align: center;"> ProcStatus IOIcon Digital I/O </div> <div style="clear: both;"></div>		<div style="float: right; width: 100px; text-align: center;"> Alarms ViewRec ProcessCtrl </div> <div style="clear: both;"></div>																															
<div style="float: right; width: 100px; text-align: center;"> Manual ProcessCtrl </div> <div style="clear: both;"></div>		<div style="float: right; width: 100px; text-align: center;"> Reporting </div> <div style="clear: both;"></div>																															
<div style="float: right; width: 100px; text-align: center;"> Config>> Tables PCS Diagnostics Status>> Control General </div> <div style="clear: both;"></div>		<div style="float: right; width: 100px; text-align: center;"> GT overview 15:41 Fri 02 Feb 2001 </div> <div style="clear: both;"></div>																															



9/11

Report: Green Tool detail - [Tool: DEM1][Tubel: OX1]

Star

Time Stamp

Report Search Criteria

Quick select

This Day

This Week

This Month

Resolution select

Calendar week

Time Span

Start

Mon

Week

22

29

May

2000

End

Sun

Week

26

02

Jul

2000

23

59

59

00

00

00

lock

Sample date:

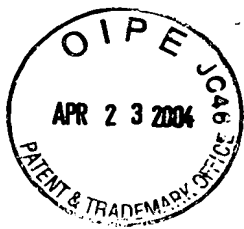
Exit

Ok

Cancel

Alarm Tube 2: WHC: House vacuum

FIG. 9



10/11

Report: Green Tool detail - [Tool: DEM1][Tubet: OX1]

Start time: 200

Time Stamp

Channels Selection

Available channels

N2

N2 - Bubbl

N2 Carousel

O2

N0

Ar

H2

Exhaust

Water

N2 Purge

Power

Add to selection>>

Selected channels

N0

N2 Carousel

Ar

N2 Purge

Power

N2

Delete

Delete all

Nr of channels: 6

Unmark Block

Sample date:

Exit

Ok

Cancel

Alarm Tube 2: WHC: House vacuum

FIG. 10



Report: Green Tool detail - [Tool: DEM1][Tubel: OX11]

Start time: [2000-05-29 00:00:00] End time: [2000-07-02 23:59:59]

Time Stamp	N2 SL	N2 Caroussel SL	Ar SL	N2 Purge SL	Power kWh	N2 SL
Wk22 2000-05-29	0.00	292433.27	95.20	46078.92	7.96	98484.69
Wk23 2000-06-05	0.00	209270.93	100.10	30542.02	7.89	97302.21
Wk24 2000-06-12	0.00	56008.93	101.35	15117.32	25.80	62757.88
Wk25 2000-06-19	0.00	248741.58	104.47	49076.31	6.46	96316.30
Wk26 2000-06-26	0.00	166886.02	55.41	19722.24	3.80	52603.92

Σ

0.00

973340.73

456.53

160536.81

51.91

407465.00

Sample date: [2000-05-29] Sample Nr: [1] Nr of samples: [5]

Exit

Filter

Channel choice

Print

Print Setup

Export

Mark Block

Unmark Block

Alarm Tube 2: WHC: BTM Elevator: Timeout

FIG. 11